

REMARKS

Applicants respectfully request that the foregoing amendments be made prior to further examination of the present application, and respectfully requests reconsideration of the present application in view of the reasons that follow. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, along with appropriate defined status identifiers.

The status of the co-assigned application has been updated in the specification.

Applicants wish to thank Examiner Garrett for the courteous interview of March 14, 2007. The discussion was most helpful in formulating the present response.

Claims 1-10, 13, 14, 18-26, 29 and 30 are again rejected under 35 U.S.C. § 103(a) as being unpatentable over Mori *et al.* (US Pat. No. 5,281,489) in view of Matsuura *et al.* (US Pub. No. 2005/0064233).

The examiner urges that Mori discloses an electroluminescent element comprising an organic luminescent layer that includes at least one hole moving and donating agent, and that "suitable hole moving and donating agents include anthracene compounds and aromatic tertiary amine compounds," citing column 4, lines 41-46. It seems that the examiner merges the separate disclosure of anthracene compounds and aromatic tertiary amine compounds. However, neither the disclosure of anthracenes or aromatic tertiary amines in Mori would have suggested aminoanthracenes to the skilled artisan.

The only anthracene compound suggested by Mori is 2, 6, 9, 10-tetraisopropoxyanthracene, which has alkyl substitutions, not an amino substitution. With respect to the tertiary amine compounds, Mori references Japanese Patent Application Laid-Open 63-264692, an application of the present applicants. The US counterpart is US 4,769,292 (Tang). In column 36, Tang mentions tertiary amines. Monoarylamines, diarylamines, triarylamines and polymeric amines are disclosed by reference to US 3,180,730, US 3,567,450 and US 3,658,520. US 3,180,730 discloses triphenylamines. US 3,567,450 and 3,658,520 disclose compounds in which the tertiary nitrogen is bonded to two

substituted or unsubstituted phenyl radicals, and to another arylene radical that is substituted with a vinyl or vinylene group and has an active hydrogen. The bonding of nitrogen to a fused ring structure is not disclosed in any of these documents. In column 37 of Tang references US 4,175,960 and US 4,539,507 as disclosing suitable aromatic tertiary amines. US 4,175,960 is similar to Tang in mentioning “Monoarylamines, diarylamines, triarylamines and polymeric amines” and references many of the same documents as Tang (US 3,180,730, US 3,567,450 and US 3,658,520). The most favored compound is N,N,N-tri(p-tolyl)amine. Again, the bonding of nitrogen to a fused ring structure is not disclosed. US 4,539,507 discloses nitrogen bonded to three carbocyclic rings, which may be saturated or unsaturated, and also reference US 4,175,960. Once again, the bonding of nitrogen to a fused ring structure is not disclosed.

Mori mentions N-phenyl-carbazole and N-isopropyl-carbazole. While these compounds do have a fused aromatic ring structure, the nitrogen atom is a ring member. Therefore, this disclosure also would not have suggested an aminoanthracene, which is an amino substituted aromatic compound. In short, Mori cannot possibly be said to disclose aminoanthracenes. Accordingly, there is no basis for substituting an “aminoanthracene” as the hole moving and donating agent in Mori.

Furthermore, the hole moving and donating agent in Mori is not the component that emits light from the medium. Holes from this compound are donated to the luminescent agent and recombine with electrons donated by the electron moving and donating agent so that the luminescent agent produces light (column 3, lines 29-57). In clear contrast, the aminoanthracene of the secondary reference Matsuura actually is the component that emits light. This is clear from paragraphs 0163 and 0164 of Matsuura, which references “the devices comprising the diaminoanthracene derivatives emitting green light, the diaminopyrene derivatives emitting blue light, and the diaminochrysene derivatives emitting pure blue light as component (A) exhibited more excellent efficiencies of light emission.... Since the anthracene derivative was used as component (B) and the diaminoanthracene derivative, the diaminopyrene derivative or the diaminochrysene derivative was used as component (A), the most excellent

efficiency of light emission and life could be achieved by the devices emitting green light, blue light and pure blue light.” Thus, the aminoanthracene derivative is taught by Matsuura as being useful as an emissive agent in a device. It would not have been obvious to substitute this compound from Matsuura for the tertiary amine of Mori, which does not emit light.

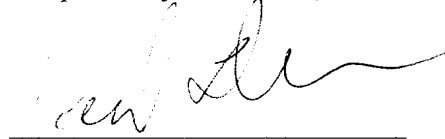
In order to emphasize more particularly this distinction, applicant has amended the claims to recite that the dopant has a bandgap smaller than that of both the first and second components of the host and provides emission centers where light is generated. This language is supported in the specification at page 12, lines 6-7 and page 5, line 25. The host material is a collector for injected holes and electrons and the dopant provides the molecular sites for light emission. By choosing a bandgap for the dopant that is smaller than that of either host component, any energy absorbed by the host materials will be transferred to the dopant. Any emission by the host material itself ceases entirely and the role of light emission is shifted to the dopant.

It would not have been obvious, based on the combination of Mori and Matsuura, to use an aminoanthracene as a host material, *i.e.*, in a context where it was not responsible for light emission. Matsuura teaches that anthracenes, its component (B), function as a host material and that aminoanthracenes, its component (A), function as a luminescent agent. Thus, Matsuura quite clearly emphasizes a distinction between anthracenes and aminoanthracenes in terms of the capacity in which they are to be used. A skilled artisan, reading Matsuura, would select the anthracene of component (B) in Matsuura, and not the aminoanthracene of component (A) to substitute for the hole moving and donating agent in Mori. Mori already suggests that the hole moving and donating agent can be an anthracene, and therefore Matsuura appears to add very little to the disclosure found in Mori. Both references suggest the use of an *anthracene* as a host where it is non-emissive, and neither reference suggests to a skilled artisan the use of an *aminoanthracene* as a host where it is non-emissive. No *prima facie* case of obviousness exists and reconsideration and withdrawal of the rejection based on Mori in view of Matsuura and Chen is requested.

Claims 10-12 and 26-28 were again rejected under 35 U.S.C. § 103(a) as being unpatentable over Mori *et al.* (US Pat. No. 5,281,489) in view of Matsuura *et al.* (US Pub. No. 2005/0064233) and in further view of Chen *et al.* (US Pub. No. 2004/0247937 A1). Chen is added for a teaching of specific dyes recited in the dependent claims, and does not overcome the failure of Mori and Matsuura to teach the features of the invention that are recited in the independent claims. No *prima facie* case of obviousness exists and reconsideration and withdrawal of the rejection based on Mori in view of Matsuura and Chen is requested.

If there are any problems with this response, or if the examiner believes that a telephone interview would advance the prosecution of the present application, Applicants' attorney would appreciate a telephone call. In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the claimed invention. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.